MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
                         CHAIRMAN OF THE JOINT CHIEFS OF STAFF
                         UNDER SECRETARIES OF DEFENSE
                         DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
                         ASSISTANT SECRETARIES OF DEFENSE
                         GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
                         INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
                         DIRECTOR, OPERATIONAL TEST AND EVALUATION
                         ASSISTANTS TO THE SECRETARY OF DEFENSE
                         DIRECTOR, ADMINISTRATION AND MANAGEMENT
                         DIRECTOR, NATIONAL RECONNAISSANCE OFFICE
                         DIRECTORS OF THE DOD FIELD ACTIVITIES
                         CHIEF INFORMATION OFFICERS OF THE MILITARY DEPARTMENTS
                         DIRECTOR, COMMAND, CONTROL, COMMUNICATIONS AND
                         COMPUTER SYSTEMS, JOINT STAFF
                         CHIEF INFORMATION OFFICERS OF THE DEFENSE AGENCIES
                         DIRECTOR, INTELLIGENCE COMMUNITY MANAGEMENT STAFF
                         INTELLIGENCE COMMUNITY CHIEF INFORMATION OFFICER
                         COMMANDERS OF THE UNIFIED COMBATANT COMMANDS

SUBJECT: DoD Chief Information Officer (CIO) Guidance and Policy Memorandum No. 9-8301-   ,
                Aligning the Technology Base (ATB)

        The focus of the ATB G&PM is to assure the DOD IT expertise and capabilities for evolving the GIG
technology base. To accomplish this goal the G&PM provides policy guidance to (1) ensure necessary IT
personnel and an R&D infrastructure in DoD services and agencies; (2) effectively influence industry to provide
technology needed by DoD, (3) and influence and leverage industry IT standards.

        To enable these goals, the ATB developed the concept of a mechanism for rating the value of emerging IT
to DoD. This concept, called the GIG IT Valuation is recommended by the GIG ATB for use across DoD and
industry as a shared knowledge base to collect and provide technical performance characteristics promised by
industry, assessed in experiments. The GIG Information Technology Valuation Profile is a web accessible
knowledge-base that tracks key technology characteristics deemed essential to the information superiority of the
Enterprise. The GITVP provides for: the identification of IT characteristics essential to the Enterprise; the collection
and maintenance of evidence to support objective assessment and visualization of particular Enterprise IT solutions'
life-cycle value, maturity, and risk; and a framework within which strategic vision may be portrayed.

        Upon conclusion and subsequent after action reviews, I will direct the Senior Civilian Official for C3I to
incorporate the attached policy guidance into the DoD Directive System. My point of contact for this effort is Mr.
Mark Norton who can be reached at (703) 607-0661, or by e-mail: nortonm@osd.pentagon.mil.

Guidance and Policy for

Assuring Department of Defense (DoD) Information Technology (IT) Expertise and Capabilities for the Evolving Global Information Grid (GIG) Technology Base

References:

(a) Public Law 105-261, Strom Thurmond National Defense Authorization Act for FY 1999, Sec. 331 (1 October 1998)

(b) Clinger-Cohen Act of 1996 (40 U.S.C. 1425)

(c) Draft Enterprise Computing G&PM (June 1999)

(d) Draft ITIP G&PM (June 1999)

1 PURPOSE

Information superiority is a critical goal of the DoD. To reach that goal, the DoD will need to collaborate with academic and commercial research and development (R&D) and standards bodies in order to assure that GIG's interests continue to be satisfied by advancing interoperable commercial off-the-shelf (COTS) and government off-the-shelf (GOTS) IT. These objectives cannot be met unless the DoD maintains the intellectual capital and environment necessary to understand, collaborate, guide and selectively promote IT R&D in areas of strategic importance to the implementation, evolution and operation of the GIG (hereafter referred to as the Enterprise).

This Guidance and Policy Memorandum (G&PM) establishes DoD policy to:

1.1 Ensure that DoD Services and Agencies maintain technically excellent IT personnel and R&D infrastructure/environment;

1.2 Effectively influence industry to provide leading edge IT products and services that substantially support evolving Enterprise needs, and to sustain the DoD IT R&D in areas not covered by industry;

1.3 Influence and leverage IT national and international standards in support of enterprise-wide interoperability and performance.

2 APPLICABILITY AND SCOPE

2.1 This G&PM applies to all of the DoD activities engaged in IT R&D, requirements setting, standards development, acquisition, implementation, testing, or evaluating of IT products or services, hereafter referred to as DoD IT activities;

2.2 This policy complies with public law [References (a) and (b)] and is intended to be consistent with the established DoD and Director of Central Intelligence (DCI) Directives referring to architecture, interoperability, acquisition and security policies and practices. Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) (ASD (C3I)) will resolve any discrepancies.

3 DEFINITIONS

COTS: (*commercial item*) Any commercially supported product or service that is marketed to the public.

GOTS: (*non-developmental item)* Products or services exclusively produced for and controlled by the U.S. Government.

DoD IT activities: Any DoD organization engaged in IT R&D, requirements setting, standards development, acquisition, implementation, evaluation, or testing of IT products or services.

IT: Any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. The term *information technology* includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources. Information Technology also includes the knowledge of how to apply information science to operations and the art of doing so effectively and efficiently. [Reference (b)]

UTE (Uniform Technology Environment): A design template providing a common, reusable configuration of technology components within the overall Computing and Network Architecture Framework (CNAF). UTEs include all required elements of hardware and software, including those components required for security, management, and distribution services, but excluding applications systems. UTEs are defined for different types of workgroup computing environments, network services, local, regional and global computing environments. [Reference (c)]

ITIP (Information Technology Investment Portfolio): An investment governance mechanism that supports the DoD's implementation of the Clinger-Cohen Act of 1996, Division E, and other laws, policies and guidance for managing IT investments. The ITIP is intended: to provide the CIO with better information to support management and investment decisions; to assist functional managers to effectively build and manage IT portfolios to fulfill strategic visions, goals, and related measures of performance; and to assist program managers to effectively manage performance, cost, and schedule risks in the acquisition of IT. [Reference (d)]

GITVP (GIG Information Technology Valuation Profile): A web accessible knowledge-base owned and maintained by the DoD CIO for the purposes of assessing, visualizing, and communicating IT value, maturity, availability and coverage of envisioned GIG capabilities. The GITVP will aggregate commercial and government IT characteristics salient to the goals and operational capabilities of the GIG; both target and actual performance measures will be maintained. It is intended that the GITVP serve to inform the ITIP and provide an objective basis for IT selection decisions.

4   POLICY

4.1. Each DoD IT activity shall maintain IT professionals whose training, expertise and number are collectively sufficient to:

4.1.1   Perform and direct R&D in the various scientific and engineering disciplines that underlie the strategic information technologies of the Enterprise including but not limited to information science, artificial intelligence, cognitive science, computer science, engineering, and mathematics;

4.1.2   Effectively lead, participate in the development of, and promulgate standards in military, commercial and international forums and standards bodies;

4.1.3   Collaborate with commercial, academic and private R&D organizations as well as Federally Funded Research and Development Centers (FFRDCs) to effectively influence the capabilities and interoperability of advanced and emerging commercial IT so that the Enterprise may maximally leverage these advances;

4.1.4   Serve as an IT resource for emergency help requests and other urgent information or modifications needed throughout the Enterprise;

4.1.5   Lead and participate in the definition and evolution of the Enterprise;

4.1.6   Assure appropriate alignment of R&D with the Enterprise needs.

4.2   Each DoD IT activity shall maintain an indigenous infrastructure for:

4.2.1   Seeking, developing and investigating innovative applications of advanced or emerging technologies to enhance, change, or even subsume the Enterprise processes and workflow in order to improve performance or efficiency of the Enterprise operations;

4.2.2   Producing and distributing GOTS IT products and services not sufficiently supported by commercial sector;

4.2.3   Transferring Service and Agency IT R&D to the commercial sector.

4.3   The DoD shall establish and maintain a GIG IT Valuation Profile (GITVP) for:

4.3.1   Providing a knowledge-base of target characteristics for IT components within the Enterprise, including but not limited to applications, services and Uniform Technology Environment (UTE) components, and corresponding experience with COTS and GOTS IT products and services;

4.3.2   Supporting acquisition of IT products and services that best meet Enterprise needs;

4.3.3   Influencing industry to provide leading edge IT products and services;

4.3.4   Fostering evolutionary thinking to envision future Enterprise needs.

4.4 The DoD shall leverage the commercial evolution of IT products and services by:

4.4.1   Actively participating in the development and promulgation of military, commercial and international standards that are relevant to the DoD IT enterprise's strategic goals;

4.4.2   Transferring the DoD IT R&D to the commercial sector for productization whenever practical;

4.4.3   Forming and participating in IT forums, institutes, workshops and web-sites that advertise the GITVP and promote commercial collaboration to achieve the Enterprise IT strategic goals.

5   RESPONSIBILITY

5.1 The DoD CIO shall:

5.1.1   Establish, maintain, and promulgate the GITVP and its associated processes;

5.1.2   Perform semi-annual reviews to ensure the effectiveness of the GITVP and its associated processes;

5.1.3   Assure the collective sufficiency of DoD IT professionals to meet the needs of paragraph 4.1;

5.1.4   Semi-annually review the state of service and agency advancement of Enterprise IT;

5.1.5   Semi-annually review and promulgate the DoD position on the direction of IT relative to the Enterprise strategic goals.

5.2 The DoD Service and Agency CIOs and the Joint Staff shall:

5.2.1   Establish programs for recruiting, retaining and training personnel for IT activities;

5.2.2   Assure the adequacy of an indigenous infrastructure to support the needs of paragraph 4.2;

5.2.3   Provide representation to the GITVP process;

5.2.4   Participate in development and review of IT direction to influence the Enterprise strategic goals;

5.2.5   Provide and coordinate experience reports on the use of IT products and services into the GITVP knowledge-base;

5.2.6   Actively solicit and enable commercial input to the GITVP.

5.3 Heads of the DoD IT activities shall:

5.3.1   Provide an appropriate indigenous infrastructure required in paragraph 4.2;

5.3.2   Actively promote, develop and promulgate IT standards by staffing voting members to participate in international, national, commercial and military standards bodies where appropriate;

5.3.3   Ensure comprehensive, accurate and timely updating of the GITVP knowledge base on key performance factors and functional characteristics of IT products and services evaluated either experimentally or in operational use.

5.4 ASD(C3I) serves as executive agent to:

5.4.1   Promulgate and issue guidance and instructions to this policy;

5.4.2   Provide appropriate guidelines for the individual DoD IT Activities that participate in military, commercial, or international standards committees;

5.4.3   Assure adequate funding of all needed standards forming activities (membership fees, staffing, travel, etc.);

5.4.4   Provide adequate funding for the establishment and maintenance of the GITVP knowledge base and update process.

6   EFFECTIVE DATE

This policy is effective immediately upon issuance and until superseded.

GLOBAL NETWORKED INFORMATION ENTERPRISE (GNIE)
Advanced Technology
Panel Membership

LAST	FIRST	RANK	ORGANIZATION	Phone	e-Mail
Archer	Mark	GS-15	DISA	703.607.6327	archerm@ncr.disa.mil
Biggin	Merle		NIMA	301-227-7458	<BigginM@nima.mil>
Brady	Ed		DARPA consultant	703-250-6338	bradyspi@worldnet.att.net
Comella*	Thomas	Capt	IMR- Adv Tech	703-998-0175	thomas.comella@tma.osd.mil
Cox	Errol		Army DISC4		coxe@pentagon-aic.army.mil
Dunn*	Kathy		ODDR&E	703-588-7415	<dunnkr@acq.osd.mil>
Eddington	Don	SES-2	DARPA/DISA JPO/CAT	703.284.8727	deddington@jop.org
Elsaesser	Christopher		MITRE	703-883-6563	chrise@mitre.org
Greenwood	Dolly		MITRE	703.883.6760	dgg@mitre.org
Holland**	Charles		ODDR&E	703-588-7443	hollancj@acq.osd.mil
Jamil*	Iftikhar	GS-15	DTRA	*(703) 810-4193*	Iftaikhar Jamil <jamili@dtra.mil>
Jones	Anne		MITRE	703-883-7202	adjones@mitre.org
Kubic	Christopher	GS-13	NSA X23	(410) 854-4060	<cmkubic@missi.ncsc.mil>
Lachow*	Irving		RAND	202-296-5000, x.5242	Irving_Lachow@rand.org
Martin	Timothy	LtCol	JCS/J6I	703-614-7004	<martintc@js.pentagon.mil>
McAuliffe	Daniel	GM-15	AFRL/IFG	315-330-2165	mcauliffed@rl.af.mil
McBride	Christine		OSD/C3I NSA	703-602-9985	mcbridec@ osd.pentagon.mil
Nelson	Andrew	15	DISA	703.284.8886	nelson@aits-jpo.disa.mil
Norton	Mark	15	OSD/C3I	703.607.0711	nortonm@osd.pentagon.mil
Schaffer	Charles	GS-15	JCS/J6I	703.614.7005	schaffcw@js.pentagon.mil
Tempestilli	Mark	CDR	OPNAV-N6	703.601.1297	tempestilli.mark@hq.navy.mil
Whittaker	Greg		MITRE	703-883-5549	greg@mitre.org
Wallace	Bill	GS-14	DLA	703-767-3129	Bill Wallace <bwallace@hq.dla.mil>
Werp	Michael	GM-14	AFCA (AFCIL)	618.256.3387	michael.werp@scott.af.mil
Zavin	Jack	GS-15	ASD(C3I)/I3	703.607.0238	jack.zavin@osd.pentagon.mil

** Panel Chairman

* ATB participants who have moved to new organizations or retired.